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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/767,695	01/24/2001	Drake Charles Stalions	58871.000006	3229

7590 10/03/2003

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EXAMINER

LEE, GUIYOUNG

ART UNIT	PAPER NUMBER
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2875

DATE MAILED: 10/03/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

09/767,695

Applicant(s)

STALIONS, DRAKE CHARLES

Examiner

Guiyoung Lee

Art Unit

2875

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-4 and 6-12 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-4 and 6-12 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

**Priority under 35 U.S.C. §§ 119 and 120**

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

**DETAILED ACTION**

1. Receipt is acknowledged of the Amendment filed July 09, 2003.

***Allowable Subject Matter***

2. The indicated allowability of canceled claim 5 is withdrawn in view of the newly discovered reference(s) to Oshio et al. (USPT 6,274,890 B1) in view of Arndt (USPT 6,376,902 B1). Rejections based on the newly cited reference(s) follow.

***Claim Rejections - 35 USC § 103***

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 1-4 and 9-12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Oshio et al. (USPT 6,274,890 B1) in view of Arndt (USPT 6,376,902 B1).

Re claim 1: Oshio teaches a light emitting diode having a surface mount package (Fig. 18); a metal lead frame (21 and 22 in Fig. 18); a reflector (8) positioned within the package; and a semiconductor die (1") positioned between an anode contact and a cathode contact over the reflector (8). Oshio does not teach a metal lead frame having mass sufficient to provide low thermal resistance and Oshio does not disclose the metal lead frame having three anode a contact pads and one cathode contact pad. However, Arndt discloses a lead frame having three anode

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contact pads and one cathode contact pads (See Fig. 1A). It would have been obvious to one having ordinary skill in the art at the time of the invention to combine Oshio's surface mount package with Arndt's lead frame in order to improve heat conduction from the chip, as taught by Arndt (col. 2, lines 11-18).

Re claim 2: Oshio teaches a focusing dome (9 in Fig. 18) operative to refract light emitted from the semiconductor die.

Re claim 3: Oshio teaches that the light reflected from the reflector can create a 120-degree illumination pattern (See 8 in Fig. 18).

Re claim 4: Oshio discloses a truncated cone shaped reflector (8 in Fig. 18).

Re claims 9-12: Oshio discloses a flip chip having a GaN-based or AlInGaP compound semiconductor and a sapphire substrate (col. 15, lines 1-11).

5. Claims 6-8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Oshio and Arndt as applied to claim 1 above, and further in view of Yeager et al. (USPT 6,507,049 B1). The teachings of Oshio and Arndt have been discussed above.

Re claims 6-8: Oshio discloses a copper lead frame (col. 10, line 20). Oshio is silent with regard to the silver-plated copper lead frame. However, Yeager discloses a lead frame made of silver-plated copper (col. 10, lines 50-51). It would have been obvious to one having ordinary skill in the art at the time of the invention to substitute Yeager's silver-plated copper lead frame with Oshio's lead frame because silver-plated copper has a low thermal resistance.

### ***Conclusion***

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6. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure:

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to **Guiyoung Lee** whose telephone number is (703) 308-8567. The examiner can normally be reached between the hours of 8:00 AM to 3:30PM Monday thru Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Sandra O'Shea, can be reached on (703) 305-4939. The fax phone number for this Group is (703)872-9318 (before final rejection), (703)872-9319 (after final rejection). The Right Fax phone number for the examiner is (703)746-4766.

Communications via Internet e-mail regarding this application, other than those under 35 U.S.C. 132 or which otherwise require a signature, may be used by the applicant and should be addressed to [**Guiyoung.lee@uspto.gov**].

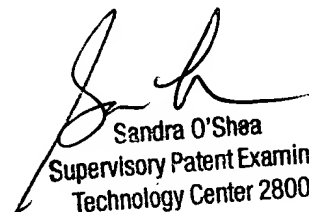
*All Internet e-mail communications will be made of record in the application file. PTO employees do not engage in Internet communications where there exists a possibility that sensitive information could be identified or exchanged unless the record includes a properly signed express waiver of the confidentiality requirements of 35 U.S.C. 122. This is more clearly set forth in the Interim Internet Usage Policy published in the Official Gazette of the Patent and Trademark on February 25, 1997 at 1195 OG 89.*

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Group receptionist whose telephone number is (703) 308-0956.

GYL

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09/16/2003

  
Sandra O'Shea  
Supervisory Patent Examiner  
Technology Center 2800